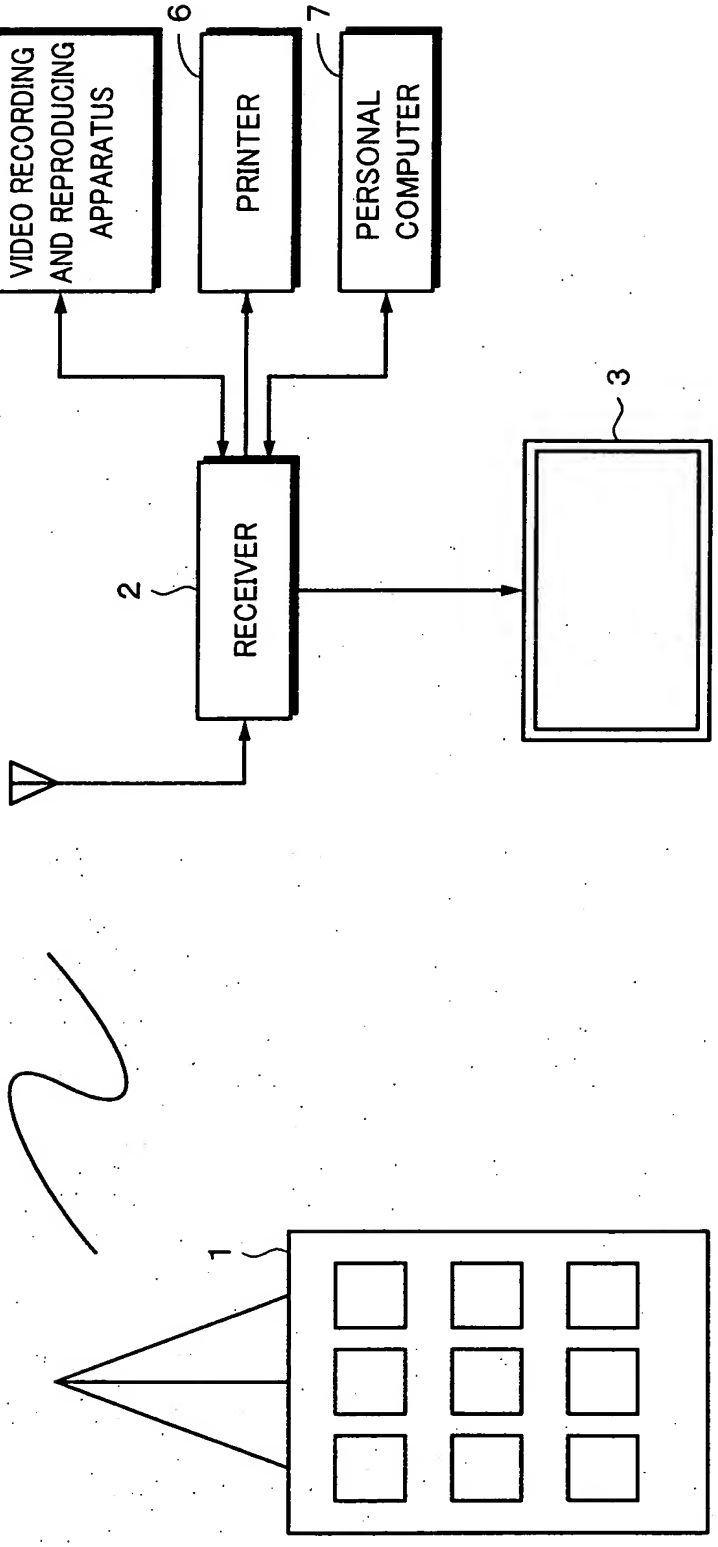
Fig. 1

DATA STRUCTURE	bit	Identifier
digital_copy_control_descriptor () {		
descriptor_tag	8	unimsbf
descriptor_length	8	unimsbf
digital_recording_control_data	2	bslbf
maximum_bit_rate_flag	1	bslbf
component_control_flag	1	bslbf
copy_control_type	2	bslbf
if(copy_control_type==01||copy_control_type==11){		
APS_control_data	2	bslbf
}		
else{		
reserved_future_use	2	bslbf
}		
if(maximum_bit_rate_flag == 1) {		
maximum_bit_rate	8	unimsbf
}		
if(component_control_flag ==1){		
component_control_length		
for(j=0;j<N;j++){		
component_tag	8	unimsbf
digital_recording_control_data	2	bslbf
maximum_bitrate_flag	1	bslbf
reserved_future_use	1	bslbf
copy_control_type	2	bslbf
if(copy_control_type==01||copy_control_type==11) {		
APS_control_data	2	bslbf
}		
else{		
reserved_future_use	2	bslbf
}		
if(maximum_bitrate_flag==1){		
maximum_bitrate	8	unimsbf
}		
}		
}		
}		

Fig. 2

DATA STRUCTURE	bit	Identifier
content_availability_descriptor () {		
descriptor_tag	8	unimsbf
descriptor_length	8	unimsbf
reserved_future_use	2	bslbf
retention_mode	1	bslbf
retention_state	3	bslbf
encryption_mode	1	bslbf
image_constraint_token	1	bslbf
for(i=0;i<N;i++){		
reserved_future_use	8	unimsbf
}		
}		

Fig. 3


5
VIDEO RECORDING AND REPRODUCING APPARATUS
6
PRINTER
7
PERSONAL COMPUTER
3
2
RECEIVER
1

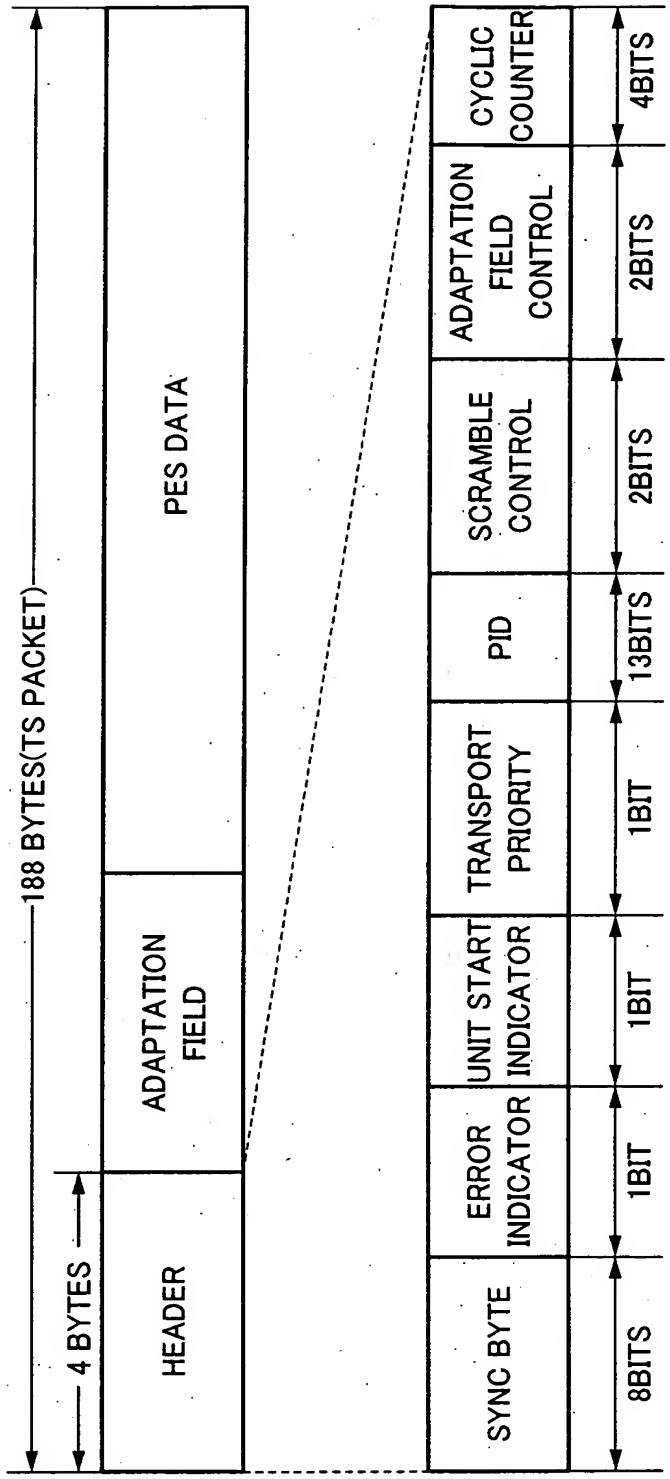

188 BYTES(TS PACKET)
4 BYTES
HEADER
ADAPTATION FIELD
PES DATA
SYNC BYTE
ERROR INDICATOR
UNIT START INDICATOR
TRANSPORT PRIORITY
PID
SCRAMBLE CONTROL
ADAPTATION FIELD CONTROL
CYCLIC COUNTER
8BITS
1BIT
1BIT
1BIT
13BITS
2BITS
2BITS
4BITS

Fig. 4A

Fig. 4B

Fig. 5

DATA STRUCTURE	bit	Identifier
still_image_copy_control_descriptor () {		
descriptor_tag	8	unimsbf
descriptor_length	8	unimsbf
reserved_future_use	3	bslbf
image_resolution_control	1	bslbf
recording_control	1	bslbf
printing_control	1	bslbf
expiration_date_flag	1	bslbf
component_flag	1	bslbf
if(image_resolution_control==1){		
maximum_horizontal_pixel_number	16	unimsbf
maximum_vertical_pixel_number	16	unimsbf
}		
if(recording_control==1){		
reserved_future_use	4	bslbf
record_prohibited	1	bslbf
recording_security	1	bslbf
print_prohibited	1	bslbf
recording_constrain_bit	1	bslbf
number_of_record	8	unimsbf
}		
if(printing_control==1){		
print_prohibited	1	bslbf
print_constraint_bit	1	bslbf
number_of_print	6	unimsbf
}		
if(expiration_date_flag==1){		
expiration_date	40	bslbf
}		
if(component_flag==1){		
component_tag	8	unimsbf
}		
for(i=0;i<N;i++){		
reserved_future_use	8	unimsbf
}		
}		

Fig. 6

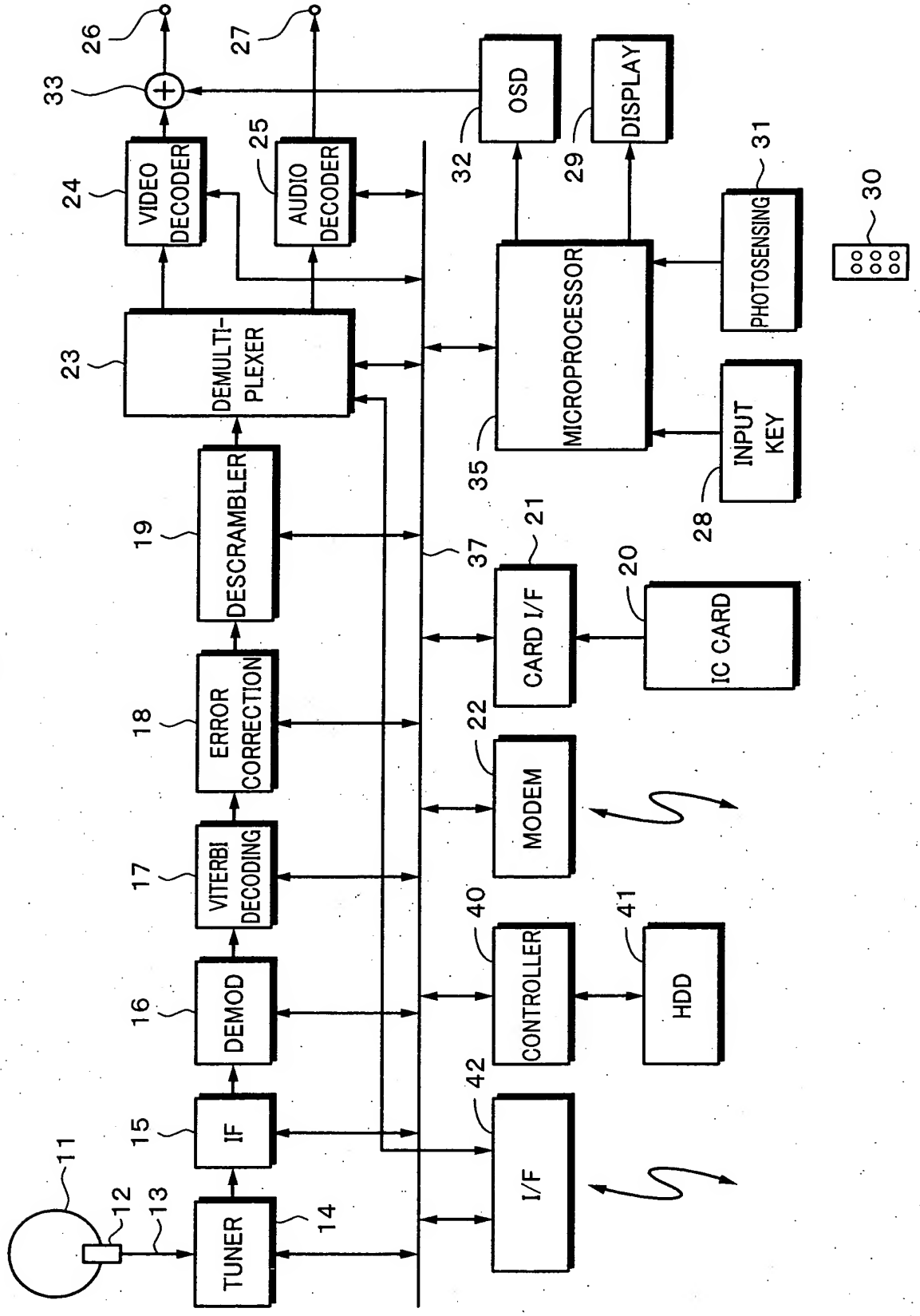

11
12
13
TUNER
14
15
IF
16
DEMOD
17
VITERBI DECODING
18
ERROR CORRECTION
19
DESCRAMBLER
23
DEMULTI-PLEXER
24
VIDEO DECODER
25
AUDIO DECODER
26
27
33
OSD
32
DISPLAY
29
31
PHOTOSENSING
30
MICROPROCESSOR
35
INPUT KEY
28
37
21
CARD I/F
20
IC CARD
22
MODEM
40
CONTROLLER
41
HDD
42
I/F

Fig. 7

DATA STRUCTURE	bit	Identifier
program_map_section(){		
table_id	8	unimsbf
section_syntax_indicator	1	bslbf
'0'	1	bslbf
reserved	2	bslbf
section_length	12	unimsbf
program_number	16	unimsbf
reserved	2	bslbf
version_number	5	unimsbf
current_next_indicator	1	bslbf
section_number	8	unimsbf
last_section_number	8	unimsbf
reserved	3	bslbf
PCR_PID	13	unimsbf
reserved	4	bslbf
program_info_length	12	unimsbf
for(i=0;i<N;i++){		
descriptor()		
}		
for(i=0;i<N;++){		
stream_type	8	unimsbf
reserved	3	bslbf
elementary_PID	13	unimsbf
reserved	4	bslbf
ES info length	12	unimsbf
for(j=0;j<N;j++){		
descriptor()		
}		
}		
CRC_32	32	rpchof
}		

Fig. 8

DATA STRUCTURE	bit	Identifier
event_information_section(){		
table_id	8	unimsbf
section_syntax_indicator	1	bslbf
reserved_future_use	1	bslbf
reserved	2	bslbf
section_length	12	unimsbf
service_id	16	unimsbf
reserved	2	bslbf
version_number	5	unimsbf
current_next_indicator	1	bslbf
section_number	8	unimsbf
last_section_number	8	unimsbf
transport_stream_id	16	unimsbf
original_network_id	16	unimsbf
segment_last_section_number	8	unimsbf
last_table_id	8	unimsbf
for(i=0;i<N;i++){		
event_id	16	unimsbf
start_time	40	bslbf
duration	24	unimsbf
running_status	3	unimsbf
free_CA_mode	1	bslbf
description_loop_length	12	unimsbf
for(j=0;j<M;j++){		
description()		
}		
}		
CRC_32	32	rpchof
}		

Fig. 9

DATA STRUCTURE	bit	Identifier
service_description_section(){		
table_id	8	unimsbf
section_syntax_indicator	1	bslbf
reserved_future_use	1	bslbf
reserved	2	bslbf
section_length	12	unimsbf
transport_stream_id	16	unimsbf
reserved	2	bslbf
version_number	5	unimsbf
current_next_indicator	1	bslbf
section_number	8	unimsbf
last_section_number	8	unimsbf
original_network_id	16	unimsbf
reserved_future_use	8	bslbf
for (i = 0;i< N;i++) {		
service_id	16	unimsbf
reserved_future_use	6	bslbf
EIT_schedule_flag	1	bslbf
EIT_present_following_flag	1	bslbf
running_status	3	unimsbf
free_CA_mode	1	bslbf
descriptors_loop_length	12	unimsbf
for (j = 0;j< M;j++) {		
descriptor()		
}		
}		
CRC_32	32	rpchof
}		

Fig. 10

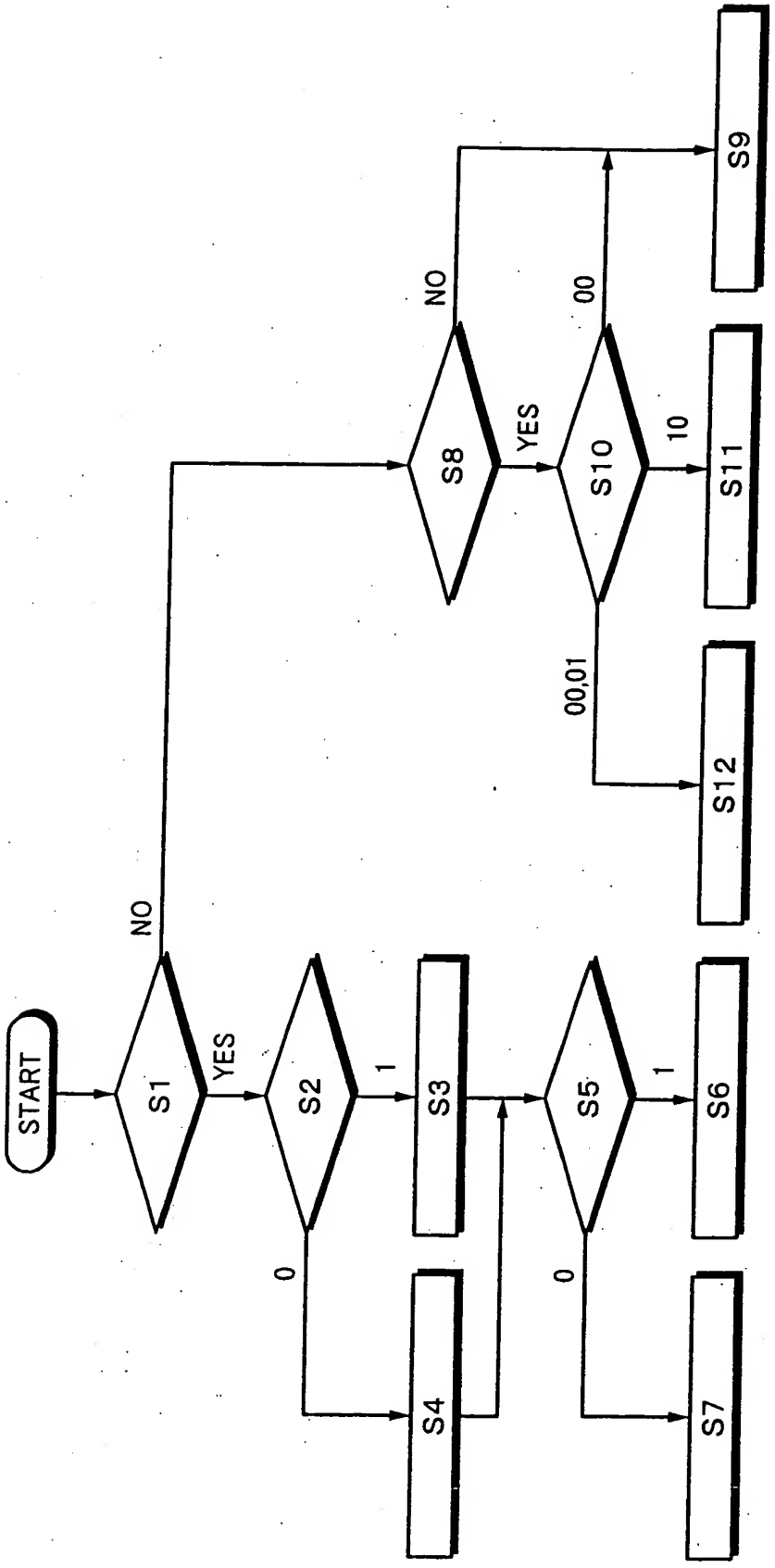
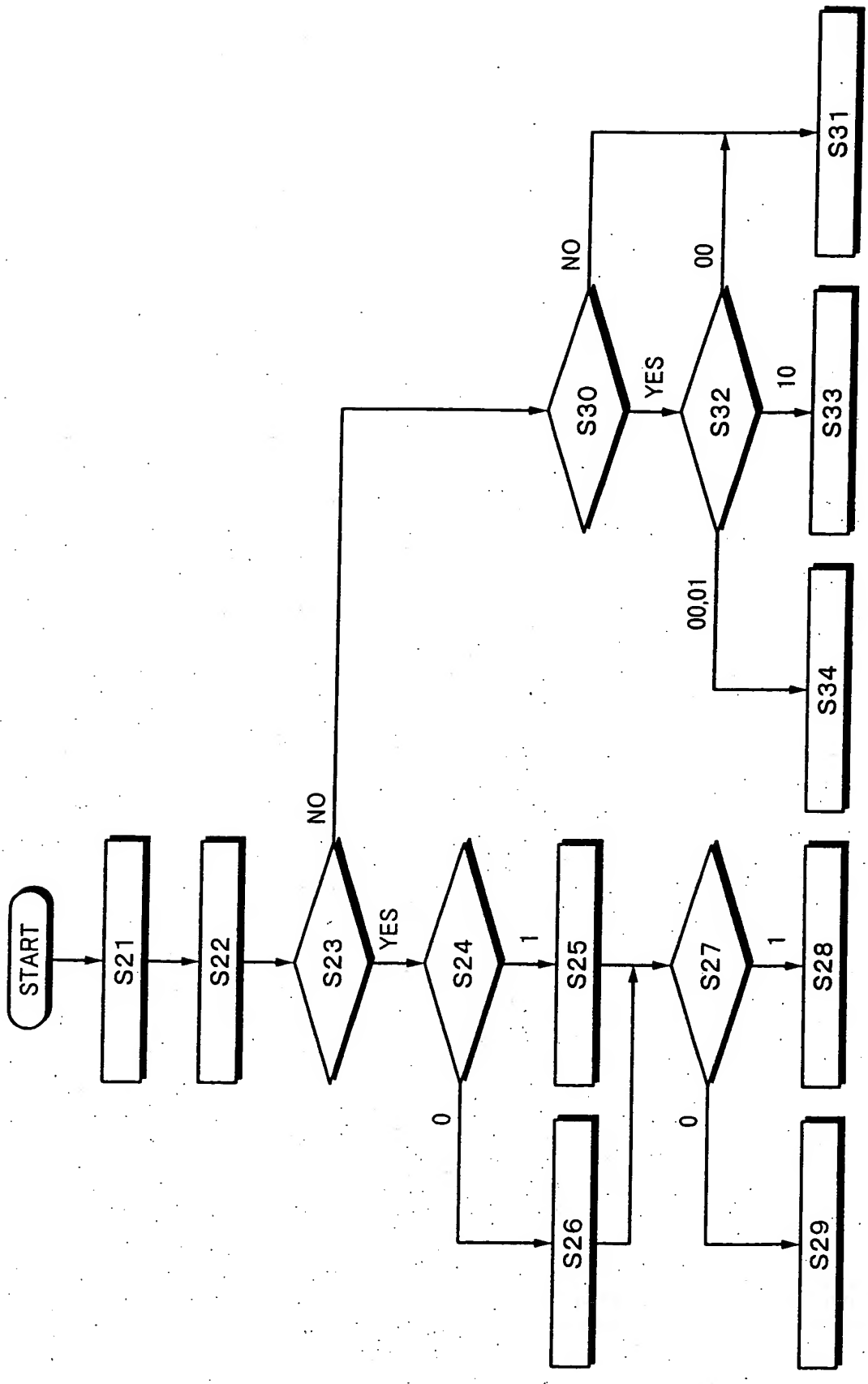

START
S1
NO
YES
S2
1
0
S3
S4
S5
1
0
S6
S7
S8
NO
YES
S9
S10
00
10
00,01
S11
S12

Fig. 11


START
S21
S22
S23
NO
YES
S24
0
1
S25
S26
S27
0
1
S28
S29
S30
NO
YES
S31
S32
00
10
S33
00,01
S34

DESCRIPTION OF REFERENCE NUMERALS

1 BROADCASTING STATION

2 RECEIVER

3 TELEVISION RECEIVER

5 VIDEO RECORDING AND REPRODUCING APPARATUS

6 PRINTER

7 PERSONAL COMPUTER

S1 STILL_IMAGE_COPY_CONTROL_DESCRIPTOR EXISTS IN PMT?

S2 printing_control?

S3 PRINTING PROCESS ACCORDING TO print_prohibited, print_constrain_bit, number_of_print, image_resolution_control, AND expiration_date

S4 PRINTABLE WITHOUT RESTRICTING CONDITION

S5 recording_control?

S6 RECORDING PROCESS ACCORDING TO recording_prohibited, recording_security, print_prohibited, number_of_print, image_resolution_control, AND expiration_date

S7 RECORDABLE WITHOUT RESTRICTING CONDITION

S8 DIGITAL_COPY_CONTROL_DESCRIPTOR EXISTS IN PMT?

S9 PRINTABLE AND RECORDABLE WITHOUT RESTRICTING CONDITION

S10 digital_recording_control_data?

S11 PRINTING PROCESS ACCORDING TO print_prohibited = 0, print_constrain_bit = 1, AND number_of_print = 1

RECORDING PROCESS ACCORDING TO record_prohibited = 0, record_security = 1, print_prohibited = 0, AND number_of_record = 1

S12 PRINTING PROCESS ACCORDING TO print_prohibited = 1,

RECORDING PROCESS ACCORDING TO record_prohibited = 1

S21 SELECT RESERVATION PROGRAM

S22 OBTAIN EIT/SDT OF RESERVATION PROGRAM

S23 STILL_IMAGE_COPY_CONTROL_DESCRIPTOR EXISTS IN EIT/SDT?

S24 printing_control?

S25 PRINT RESERVING PROCESS ACCORDING TO print_prohibited, print_constrain_bit, number_of_print, image_resolution_control, AND expiration_date

S26 PRINT RESERVING PROCESS OF PRINTABLE WITHOUT RESTRICTING CONDITION

S27 recording_control?

S28 RECORDING RESERVING PROCESS ACCORDING TO recording_prohibited, recording_security, print_prohibited, number_of_print, image_resolution_control, AND expiration_date

S29 RESERVING PROCESS OF RECORDABLE WITHOUT RESTRICTING CONDITION

S30 DIGITAL_COPY_CONTROL_DESCRIPTOR EXISTS IN PROGRAM INFORMATION OF EIT/SDT?

S31 RESERVING PROCESS OF PRINTABLE AND RECORDABLE WITHOUT RESTRICTING CONDITION

S32 digital_recording_control_data?

S33 PRINT RESERVING PROCESS ACCORDING TO print_prohibited = 0, print_constrain_bit = 1, AND number_of_print = 1, RECORDING RESERVING PROCESS ACCORDING TO record_prohibited = 0, record_security = 1, print_prohibited = 0, AND number_of_record = 1

S34 PRINTER RESERVATION IS IMPOSSIBLE, STILL IMAGE RECORDING RESERVATION IS IMPOSSIBLE